

¹Karolinska Institute, Solna, Sweden, ²OptumInsight, Stockholm, Sweden, ³Vilnius University, Faculty of Medicine, Vilnius, Lithuania, ⁴Bone Metabolism Unit, Istituto Auxologico Italiano IRCCS, Milan, Italy, ⁵Clinical Epidemiology Unit, Hospital Infantil Federico Gómez and Faculty of Medicine UNAM, Mexico city, Mexico, ⁶Fundación Jimenez Diaz, Madrid, Spain, ⁷Department of Internal Medicine, Division of Endocrinology and Metabolism, Medical University of Graz, Graz, Austria, ⁸Ural State Medical Academy, Yekaterinburg, Russia, ⁹Academic Unit of Bone Metabolism, Metabolic Bone Centre, University of Sheffield, Sheffield, UK, ¹⁰Department of Medicine, NorthWest Academic Centre, The University of Melbourne, Melbourne, Australia, ¹¹INSERM U1059, CHU-St-Etienne, Saint Etienne, France, ¹²LIME/MMC, Karolinska Institutet, Stockholm, Sweden, ¹³WHO Collaborating Centre for Metabolic Bone Diseases, University of Sheffield, Sheffield, UK

OBJECTIVES: The International Costs and Utilities Related to Osteoporotic fractures Study (ICUROS) is an ongoing 18 months prospective observational study with the objective of estimating resource use and health related quality of life related to osteoporotic fractures. This study aims to describe the resource utilization after vertebral fractures (sustained during 2007-2012) pooled from nine countries: Australia, Austria, France, Italy, Lithuania, Mexico, Russia, Spain, and the UK. **METHODS:** Patients studied were ≥ 50 years and lived at home prior to fracture. Data were collected through patient interviews and review of medical records: at baseline, 4, 12, and 18 months after fracture. Only resource use related to the fracture event was collected. **RESULTS:** There were 636, 572, and 536 patients available for analysis at 4, 12 and 18 months follow-up, respectively. The mean age (\pm SD) at fracture was 70 \pm 10 years and 81% were women. 45% of patients were hospitalized. Mean hospital length of stay (LoS) (\pm SD) was 5.7 \pm 12.4 days during months 0-4 and 0.9 \pm 9.8 during months 5-18. The mean number of physician visits (\pm SD) was 2.8 \pm 2.7 during months 0-4 and 1.9 \pm 3.4 between months 5-18. The mean number of nurse visits (\pm SD) was 1.4 \pm 8.5 and 1.5 \pm 19.9 during the corresponding periods, respectively. During months 0-4, 72% of patients used analgesics, 59% calcium/vitamin D, and 41% pharmacological interventions for osteoporosis. The respective uptakes for months 5-18 were 56%, 55% and 34%. **CONCLUSIONS:** The majority of health care consumption related to vertebral fracture occurs during the first 4 months but substantial consumption persists up to 18 months after fracture.

PMS45

HEALTH CARE UTILIZATION PATTERNS ASSOCIATED WITH ONSITE VERSUS OFFSITE CHIROPRACTIC CARE

Kindermann SL¹, Hou Q², Miller RM³

¹Cerner Research, Culver City, CA, USA, ²Cerner Research, North Kansas City, MO, USA, ³Cerner Health Connections, Culver City, CA, USA

OBJECTIVES: Musculoskeletal conditions are the primary cause of physical disability in the United States, and have implications for workplace productivity and employer health costs. This study determined the influence of employer-sponsored, onsite chiropractic care on health care utilization. **METHODS:** A retrospective claims analysis of members of an employer-sponsored health plan receiving chiropractic care exclusively onsite or offsite from 2010-2012. Data were obtained from the employer's health benefits administration program. Eligible participants had continuous enrollment in the health plan and ≥ 1 billing code for chiropractic services during the 36-month study period. Utilization was assessed in 2 categories: radiological procedures and clinical care. Utilization differences were evaluated by having ≥ 1 health care event in any category. Continuous variables were summarized as means, and binary variables as counts and proportions. Differences were assessed via chi-square test for categorical variables and t-test and Kruskal-Wallis non-parametric test for continuous variables. Comparisons were considered significant at alpha = 0.05. **RESULTS:** The analysis included 876 onsite and 759 offsite participants. The populations were similar in gender; the onsite group was slightly younger. The offsite group received more radiology services overall (55.5% vs 38.2%, $P < 0.001$) including x-ray (46.0% vs 26.6%; $P < 0.0001$); ultrasound (15.8% vs 10.7%, $P < 0.0001$), and magnetic resonance imaging (14.6% vs 12.4%, $P < 0.0001$); had higher outpatient (47.3% vs 30.2%, $P < 0.0001$) and emergency department (19.0% vs 13.1%; $P = 0.022$) utilization; and demonstrated greater use of chiropractic care (mean 15.2 vs 9.16 visits; $P < 0.0001$) and physical therapy (mean 9.6 vs 1.5 visits; $P < 0.0001$). **CONCLUSIONS:** In patients needing chiropractic care, those utilizing onsite services had lower health care utilization, including radiology services, clinical care, and counts of chiropractic and physical therapy services. The study results support the value of chiropractic services offered at onsite health centers, where more tightly managed and evidence-based approaches to musculoskeletal conditions can be facilitated.

PMS46

HEALTH CARE RESOURCE UTILIZATION IN THE MANAGEMENT OF KNEE OSTEOARTHRITIS WITH HYALURONIC ACID IN A CANADIAN REAL-WORLD POPULATION

Petrella RJ¹, Gill D², Wakeford C³

¹University of Western Ontario, London, ON, Canada, ²University of Washington, London, ON, Canada, ³Sanofi Canada Inc., Laval, QC, Canada

OBJECTIVES: To examine the health care resource utilization in patients with knee osteoarthritis and treated with Hylan G-F 20 (Synvisc, Genzyme Biosurgery) compared with patients treated with alternative intra-articular hyaluronic acid (HA) injections in Ontario, Canada. **METHODS:** This is an observational, prospective cohort of patients 18 years and older who, between June 1, 1999 and December 31, 2012 had: 1) a diagnosis of knee osteoarthritis identified by ICD 9-10 or text coding; 2) received at least 1 treatment cycle with intra-articular HA and; 3) complete pain and mobility data for each treatment cycle. Data from the Southwestern Ontario (SWO) database, has been continuously compiled since 1999 and includes demographic, biometric, laboratory, diagnostic and health resource measures as collected in a primary care setting. Health care resource utilization included clinic visits, emergency visits, hospitalizations, home care visits, knee bracing, radiographs, and work absenteeism. Differences between treatments were compared using independent sample t-tests. **RESULTS:** 6,618 patients met all inclusion criteria of which 44% were treated with Hylan G-F 20. Patients were similar across treatment groups. During the follow-up period, patients received, on average, 6 HA treatment cycles

and an annual knee X-ray, with 445 of them needing a knee brace during this period. During the study period there were 6,705 osteoarthritis-related hospitalizations, and over 10,000 combined physiotherapy (PT)/occupational therapy (OT) and home care nursing visits among patients prescribed HA. Hylan G-F 20 patients had fewer visits to a GP (36%) and specialist (39%), lower use of PT/OT (23% and 1%) and home care nursing (2%) services compared to other HA treatments ($p < 0.05$ for all comparisons). **CONCLUSIONS:** This analysis demonstrates that not all HA injections in patients with knee osteoarthritis represent similar resource utilization. Further real world examination of the effectiveness of HA for reducing clinical symptoms and improving health care resource utilization in knee osteoarthritis is warranted.

MUSCULAR-SKELETAL DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PMS47

THE RELATIONSHIP BETWEEN ADHERENCE AND HEALTH CARE COST AMONG PATIENTS WITH RHEUMATOID ARTHRITIS: A RETROSPECTIVE CASE COMPARISON STUDY

Clark B¹, DuChane J¹, Miller R², Duncan I¹

¹Walgreen Co., Deerfield, IL, USA, ²Walgreen Co., Carnegie, PA, USA

OBJECTIVES: The objective of this research report was to examine the relationship between medication adherence levels and health care cost among patients with rheumatoid arthritis (RA). **METHODS:** This study used a retrospective case comparison design to examine per member per month (PMPM) medical cost. The commercial population of patients with RA was extracted from two large claims data bases between years 2006 and 2009. The case cohort consisted of compliant patients (MPR $\geq 80\%$) receiving medication management from the Specialty division of a large pharmacy retail chain. The comparison cohort consisted of non-compliant patients (MPR $< 80\%$) from a national benchmark pharmacy and medical claims data base. Using propensity scores, patients were matched on age, gender, risk score, socio-economic status, standard industrial classification code, comorbid conditions, and pre-medication gap. This process resulted in 512 one-to-one match pairs. **RESULTS:** Patients with RA who were compliant to their medication regimen had 25% lower PMPM medical cost (in-patient, out-patient, professional, and emergency room cost) than patients who were non-compliant (\$637 vs. \$855 respectively; $P = 0.0458$). The majority of this cost difference was due to in-patient cost which was 46% lower for compliant patients, followed by professional cost which was 15% lower for compliant patients. A closer look at medical cost by levels of compliance reveals that PMPM medical cost decreased at each level of medication compliance described below. Patients with adherence levels less than 40% had PMPM cost of \$1024, those with adherence levels between 40% and 80% had PMPM cost of \$838, and patients with adherence levels greater than or equal to 80% had PMPM cost of \$637. **CONCLUSIONS:** Medical cost decreases as adherence to the RA medication regimen increases. Given that the cost of treating RA can be extremely expensive, one approach to addressing this financial issue is to target medication adherence.

PMS48

WITHDRAWN

PMS49

GOLIMUMAB UTILIZATION PATTERNS AND REFILL ADHERENCE IN PATIENTS WITH RHEUMATOID ARTHRITIS, PSORIATIC ARTHRITIS AND ANKYLOSING SPONDYLITIS

Ellis L¹, Bolge S¹, Rice P²

¹Janssen Scientific Affairs, LLC, Horsham, PA, USA, ²Premier Research, Naperville, IL, USA